Problem C: The Staff of Ra

Indiana is now very close to finding the Ark, but he's not the only one interested in it! René Belloq, a French archaeologist who seems to be always one step ahead of Indy, is also looking for the Ark, and he has even started an excavation on what he thinks is the right spot. However, he's digging in the wrong place...

King Shishak, an ancient Egyptian pharaoh, hid the Ark in a secret chamber, and the only clues left behind to find it were a "map room", a room with a scale model of the city of Tanis, and the *Staff of Ra*, a wood shaft with a headpiece on top that can concentrate rays of light from one side of it, and radiate a single beam on the other side, without changing the orientation of the rays. By placing the staff at the base of the map at the right time of the day, it produces a strong ray of light that indicates the correct location to dig at.

Figure 1: Indy discovers the real location of the Ark

Belloq tried to replicate the staff, but he had incomplete information, so he built it with the wrong height. Indy, on the other hand, managed to create a staff with the right dimensions, thanks to extra information found in the Staff's real headpiece.
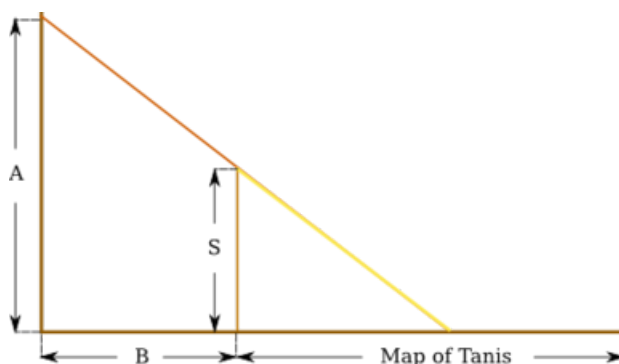

Figure 2: Geometric model of the map room

Given the height of the source of light in the map room (**A**), the horizontal distance from that source to the base of the map (**B**), and the height of the two staffs (**S**), by how much is Belloq's estimation wrong?

Input

Input starts with a positive integer **T**, that denotes the number of test cases ($T \leq 5000$).

There are four integer numbers in each test case:

- **A**: The height of the source of light. $1 \leq A \leq 1000$.

- **B**: The horizontal distance from the source of light to the base of the map. $1 \leq B \leq 1000$.

- S_1: The length of Belloq's staff. $1 \leq S_1 < A$.

- S_2: The length of Indy's staff. $1 \leq S_2 < A$.

All distances are given in centimeters. In addition, you can assume that $S_1 \neq S_2$.

Output

For each test case, print the case number, and then print the distance in centimeters between the two spots discovered by the two staffs. Print this value as a positive, rational number p/q where p and q are coprimes.

Sample Input

```
2
350 500 190 200
800 100 301 300
```

Output for Sample Input

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Case 1: 875/12
Case 2: 160/499
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